

Claim 1 has been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicants have amended Claim 1 by correcting the antecedent basis of the term “cooling rate.”

In view of this Amendment, Applicants respectfully submit that amended Claim 1 is not indefinite. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

### **Claim Rejections - 35 U.S.C. §102**

The rejection of Claims 1-4, 8, 10-14, and 16-18 under 35 U.S.C. §102(b) as being anticipated by Imai et al. (WIPO Publication No. WO 03/035922, whose English equivalent is U.S. 2004/0166360) is respectfully traversed.

Imai et al. teaches a process to form a hardened steel part from a hot press forming process of a hardenable steel sheet. This steel sheet is coated with zinc or a zinc alloy, wherein this zinc or zinc alloy coating forms a **ZnO layer sufficiently on the surface of the plated layer**. Although in some of the examples mentioned in Imai et al. (in paragraph 59 and paragraph 60) an alloy with 5% aluminum, the rest zinc is mentioned, a skin of an oxide of an oxygen affinity element like aluminum is **not disclosed** in the Imai document. Further, in paragraphs 59 and 60 it is mentioned that a pure zinc plated layer or a galvanealed layer obtained by heating or annealing a **pure zinc plated layer** is preferred.

Thus, Imai et al. not only fails to disclose Applicants’ claimed invention, Imai et al. teaches away from Applicants’ claimed invention. Furthermore, as mentioned on page 8, first paragraph of Applicants’ specification, this very thin oxide layer of the high oxygen affinity element protects the underlying zinc-containing corrosion protection coating from **oxidation, even at very high temperatures**.

In contrast, Imai et al. teaches to oxidize this zinc layer, which should be protected by the invention from oxidation. Thus, Imai et al. fail to disclose the limitation of the coating containing one or more high oxygen affinity elements in a total quantity of 0.1 % by weight to 15 % by weight in relation to the overall coating, as recited in Applicants’ Claim 1.

Imai et al. also fails to disclose the limitation of a superficial skin comprising an oxide of the high oxygen affinity element(s) being formed on the coating, as recited in Applicants' Claim 1.

For at least the reasons given above, Applicants respectfully submit that Imai et al. fails to disclose each and every limitation of Claim 1. Since Claims 2-4, 8, 10-14, and 16-18 depend from Claim 1, either directly or indirectly, Imai et al. also fails to anticipate these claims.

Furthermore, regarding Claims 11-14, Imai et al. does not disclose the same coating process as claimed by Applicants, but merely discloses as an example five percent aluminum. The state of the art at the time of Imai et al. failed to disclose an oxide of aluminum; thus, there is no suggestion in the art that an oxide of aluminum would have inherently formed on the surface of a zinc-based coating. If such inherent formation had happened, no zinc oxide would have been formed on the surface layer. This feature would have been mentioned by Imai et al. if it had happened. Further, Imai et al. fails to disclose or suggest the inherent presence of an iron rich phase and a zinc rich phase. Consequently, in the absence of impermissible hindsight, Imai et al. fails to disclose or suggest Applicants' claimed invention.

### **Claim Rejections - 35 U.S.C. §103**

#### **A. Imai et al.**

The rejection of Claim 15 under 35 U.S.C. §103(a) as being unpatentable over Imai et al. is respectfully traversed.

As explained above, Imai et al. not only fails to disclose Applicants' claimed invention as recited in independent Claim 1 from which Claim 15 depends, Imai et al. teaches away from Applicants' claimed invention. In particular, because Imai et al. teaches to oxidize the zinc layer, Imai et al. teaches away from the protective properties recited in Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that the teachings of Imai et al. fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**B. Imai et al. in view of Arezzo et al.**

The rejection of Claims 5-7 and 9 under 35 U.S.C. §103(a) as being unpatentable over Imai et al. in view of Arezzo et al. (U.S. Patent No. 6,335,053) is respectfully traversed.

As explained above, Imai et al. not only fails to disclose Applicants' claimed invention as recited in independent Claim 1 from which Claims 5-7 and 9 depend, Imai et al. teaches away from Applicants' claimed invention.

Furthermore, Arezzo et al. discloses a method for producing coated metallic bands by physical vapor deposition but it does not pertain to a **hardenable** steel sheet and the whole process of Applicants' Claim 1. In particular, Applicants' claimed invention is directed to a method for producing a hardened steel part having cathodic corrosion protection that includes the step of applying a coating to a **hardenable** steel alloy. Thus, there is no suggestion or motivation to combine the teachings of Imai et al. and Arezzo et al. to arrive at Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that the teachings of Imai et al. in view of Arezzo et al. fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**C. Imai et al. in view of Applicants' admitted prior art**

The rejection of Claims 19 and 21-26 under 35 U.S.C. §103(a) as being unpatentable over Imai et al. in view of Applicants' admitted prior art is respectfully traversed.

As explained above, Imai et al. not only fails to disclose Applicants' claimed invention as recited in independent Claim 1 from which Claims 19 and 21-26 depend, Imai et al. teaches away from Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that the teachings of Imai et al. fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**D. Imai et al. in view of Gegner**

The rejection of Claim 20 under 35 U.S.C. §103(a) as being unpatentable over Imai et al. in view of Gegner (U.S. Publication No. 2003/0193120) is respectfully traversed.

As explained above, Imai et al. not only fails to disclose Applicants' claimed invention as recited in independent Claim 1 from which Claim 20 depends, Imai et al. teaches away from Applicants' claimed invention. Gegner fails to overcome the deficiencies or the contradictory nature of Imai et al. in view of Applicants; claimed invention.

For at least the reasons given above, Applicants respectfully submit that the teachings of Imai et al. in view of Gegner fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**E. Zeizinger et al. (§102(b) or §103(a))**

The rejection of Claims 1-3, 10, and 16-18 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Zeizinger et al. (WIPO Publication No. WO2001/088216, whose English equivalent is U.S. 2003/0155048) is respectfully traversed.

The Zeizinger et al. reference pertains to a non-hardenable, so-called IF steel, which is the normal steel for deep drawing but not hardening in automobile applications. Nowhere in Zeizinger et al. can the words "hardening," "hardened," or "hardened steel" be found. Due to the low carbon content of the steel, it is well known to a person skilled in the art that the steel is not hardenable at all.

Furthermore, Zeizinger et al. teaches heating the coated sheet to a temperature between 500°C and not more than 540°C. This is a normal galvannealing temperature; in this temperature range even a hardenable steel will not be hardened as the microstructural change necessary for the hardening will not appear.

Thus, Zeizinger fails to disclose a method for producing a **hardened** steel part having cathodic corrosion protection that includes the step of applying a coating to a **hardenable** steel alloy, as recited in Applicants' Claim 1.

Furthermore, Zeizinger et al. also fails to disclose bringing the coated hardenable steel alloy, at least in some areas, to a temperature necessary for hardening (which is over 800°C), as recited in Applicants' Claim 1.

As mentioned, because Zeizinger et al. teaches a maximum temperature of 540°C, Zeizinger et al. fails to disclose heating the coated hardenable steel alloy until it undergoes a microstructural change necessary for the hardening, as recited in Applicants' Claim 1.

Zeizinger et al. also fails to disclose the limitations of:

a superficial skin comprising an oxide of the high oxygen affinity element(s) being formed on the coating;

forming the hardenable steel alloy into a sheet before or after the heating; and

cooling the sheet after sufficient heating, a cooling rate being calculated in order to achieve a hardening of the sheet alloy;

since Zeizinger et al. fails to disclose a superficial skin comprising an oxide of the high oxygen affinity element(s) being formed on the coating, and no forming before hardening is mentioned. Furthermore, in Zeizinger et al. the sheet will not be cooled after sufficient heating with a cooling rate being calculated in order to achieve a hardening of the sheet alloy.

For at least the reasons given above, Applicants respectfully submit that Zeizinger et al. fails to disclose each and every limitation of Claim 1. Since Claims 2, 3, 10, and 16-18 depend from Claim 1, either directly or indirectly, Zeizinger et al. also fails to anticipate these claims.

Additionally, Zeizinger et al. provides no suggestion or motivation to modify the teachings therein to apply to hardenable steel, or to produce hardened steel parts. Thus, Applicants respectfully submit that the teachings of Zeizinger et al. fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**F. Zeizinger et al.**

The rejection of Claims 11-15 under 35 U.S.C. §103(a) as being unpatentable over Zeizinger et al. is respectfully traversed.

As explained above, Zeizinger et al. fails to disclose or suggest essentially all of the limitations of independent Claim 1, from which Claims 11-15 depend. Zeizinger et al. further fails to provide any motivation to modify its teachings to achieve the process steps recited in Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**G. Zeizinger et al. in view of Arezzo et al.**

The rejection of Claims 4-9 under 35 U.S.C. §103(a) as being unpatentable over Zeizinger et al. in view of Arezzo et al. is respectfully traversed.

As explained above, Zeizinger et al. fails to disclose or suggest essentially all of the limitations of Applicants' independent Claim 1 from which Claims 4-9 depend.

As also explained above, Arezzo et al. discloses a method for producing coated metallic bands by physical vapor deposition but it does not pertain to a **hardenable** steel sheet and the whole process of Applicants' Claim 1. In particular, Applicants' claimed invention is directed to a method for producing a hardened steel part having cathodic corrosion protection that includes the step of applying a coating to a **hardenable** steel alloy. Thus, there is no suggestion or motivation to combine the teachings of Zeizinger et al. and Arezzo et al. to arrive at Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that the teachings of Zeizinger et al. in view of Arezzo et al. fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**H. Zeizinger et al. in view of Applicants' admitted prior art**

The rejection of Claims 19 and 21-26 under 35 U.S.C. §103(a) as being unpatentable over Zeizinger et al. in view of Applicants' admitted prior art is respectfully traversed.

As explained above, Zeizinger et al. fails to disclose or suggest essentially all of the limitations of Applicants' independent Claim 1 from which Claims 19 and 21-26 depend.

For at least the reasons given above, Applicants respectfully submit that the teachings of Zeizinger et al. fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**I. Zeizinger et al. in view of Gegner**

The rejection of Claim 20 under 35 U.S.C. §103(a) as being unpatentable over Zeizinger et al. in view of Gegner is respectfully traversed.

As explained above, Zeizinger et al. fails to disclose or suggest essentially all of the limitations of Applicants' independent Claim 1 from which Claim 20 depends. Gegner fails to overcome the deficiencies of Zeizinger et al.

For at least the reasons given above, Applicants respectfully submit that the teachings

of Zeizinger et al. in view of Gegner fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

### **Double Patenting**

#### **A. Application Serial No. 10/566,219**

The rejection of Claims 1-26 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-14 of co-pending U.S. Patent Application No. 10/566,219 is respectfully traversed.

Where a provisional rejection on the ground of nonstatutory obviousness-type double patenting is made between two or more co-pending applications, MPEP §804(I)(B) states that “[i]f a “provisional” nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the Examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer,” and “[i]f both applications are filed on the same day, the examiner should determine which application claims the base invention and which application claims the improvement (added limitations). The ODP rejection in the base application can be withdrawn without a terminal disclaimer, while the ODP rejection in the improvement application cannot be withdrawn without a terminal disclaimer.”

Applicants believe that all claims in the present case are now in condition for allowance. Since this application and U.S. Patent Application No. 10/566,219 claim the same priority date, Applicants respectfully request the Examiner to determine which application claims the base invention and which application claims the improvement.

#### **B. Application Serial No. 10/566,069**

The rejection of Claims 1-26 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1, 3, and 8-28 of co-pending U.S. Patent Application No. 10/566,069 is respectfully traversed.

Where a provisional rejection on the ground of nonstatutory obviousness-type double patenting is made between two or more co-pending applications, MPEP §804(I)(B) states that

“[i]f a “provisional” nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the Examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer,” and “[i]f both applications are filed on the same day, the examiner should determine which application claims the base invention and which application claims the improvement (added limitations). The ODP rejection in the base application can be withdrawn without a terminal disclaimer, while the ODP rejection in the improvement application cannot be withdrawn without a terminal disclaimer.”

Applicants believe that all claims in the present case are now in condition for allowance. Since this application and U.S. Patent Application No. 10/566,069 claim the same priority date, Applicants respectfully request the Examiner to determine which application claims the base invention and which application claims the improvement.

### **Conclusion**

Applicants intend to be fully responsive to the outstanding Office Action. If the Examiner feels that any issues remain regarding this Amendment, then Applicants’ undersigned attorney would like to discuss the case with the Examiner. Applicants sincerely believe that this Patent Application is now in condition for allowance and, thus, respectfully request early allowance.

Applicants believe no fees are due with respect to this filing. However, should the Office determine additional fees are necessary, the Office is hereby requested to contact the undersigned to arrange for payment.

Respectfully submitted,

/Melanie I. Rauch/

**SIGNATURE OF PRACTITIONER**

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